ADDENDUM NO. 2

CITY OF HIALEAH
72 UNIT ELDERLY HOUSING
275 PALM AVE.
HIALEAH, FLORIDA

FEBRUARY 20, 2013

TO ALL CONCERNED

The original Contract Documents, for the Project entitled **CITY OF HIALEAH – 72 Unit Elderly Housing, PAINTING AND WATERPROOFING BID NO. 2012/13-3230-00-003** is hereby amended as noted in this **Addendum No. 2.**

This **Addendum No. 2** consists of **26** Typed Pages, **0** Sketches, **0** Attachments and **0** Drawings. All other items and conditions of the original Contract Documents shall remain unchanged. This Addendum shall become a part of the Contract Documents.

Approved for issue: _____ Date: February 20, 2013
Luis Azan - Project Manager

ACKNOWLEDGEMENT

Receipt of this **Addendum No. 2** shall be acknowledged in the space provided on the ADDENDUM RECEIPT FORM (ARF) (copy attached) now a part of the Contract Documents faxed immediately to City of Hialeah @ (305) 687-2642, and submitted with sealed bids.

IN THE CONTRACT DOCUMENTS:

INCLUSION OF Architectural and LEED specifications:

1. Painting Section 09900 – Pages 1 through 6
2. Balcony Waterproofing Section 07121 – Pages 1 through 3
3. Fluid Applied Waterproofing Section 07120 – Pages 1 through 4
4. Waterproofing Below Floor Tile at Laundry Room Section 07142 – Pages 1 through 6
5. LEED Requirements Section 01352 – Pages 1 through 6

PAINTING AND WATERPROOFING-BID #2012/13-3230-00-003

END OF ADDENDUM NO. 2

ADDENDUM RECEIPT FORM

CITY OF HIALEAH
72 UNIT ELDERLY HOUSING
275 PALM AVE
HIALEAH, FLORIDA

CONTRACTOR'S NAME _____

ADDRESS _____

PHONE NO. _____ **FAX NO.** _____

CONTACT NAME _____ **SIGNATURE** _____

THE BIDDER ACKNOWLEDGES RECEIPT OF THE FOLLOWING ADDENDUM BY SIGNING AND DATING BELOW: COPY OF THIS FORM MUST BE FAXED AND IMMEDIATELY TO CITY of HIALEAH @ (305) 687-2642.

ADDENDUM	SIGNATURE	DATE
2		

PAINTING AND WATERPROOFING-BID #2012/13-3230-00-003

ARF

SECTION 09900

PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Painting Exterior Surfaces Including But Not Limited To:
1. Stucco; concrete; precast concrete.
2. Exposed block.
3. Ferrous metals.
4. Galvanized metal.
5. Wood surfaces.
6. PVC pipe.

B. Painting Interior Surfaces Including But Not Limited To:
1. Gypsum board.
2. Block, concrete, back-of concrete tie beams and columns, precast concrete.
3. Ferrous metals.
4. Galvanized metals.
5. Wood trim, paint finish.
6. Wood trim, stain finish.
7. Exposed ferrous piping, valves and hangers.
8. Exposed pipe insulation.
9. Exposed ductwork, galvanized piping and conduits.
10. Exposed copper tubing, valves and fittings.

C. This section includes LEED requirements.

1.02 RELATED SECTIONS

A. Cast-In-Place Concrete - Section 03300.

B. Plant-Precast Concrete - Section 03410.

C. Reinforced Masonry - Section 04230.

D. Structural Steel - Section 05120.

E. Metal Fabrications - Section 05500.

F. Handrails and Railings - Section 05520.

G. Rough Carpentry - Section 06100.

H. Cabinetwork - Section 06410.

I. Joint Sealants - Section 07900.

J. Steel Doors and Frames - Section 08110.

K. Access Panels - Section 08305.

L. Stucco - Section 09200.

M. Gypsum Board - Section 09250.

N. Mechanical and Electrical System Item Identification Requirements - Divisions 15 And 16.

1.03 SUBMITTALS

A. A minimum of 30 days prior to initiating this work, submit for review, product data, including paint label analysis and application instructions for each material proposed for each coat on each surface, including names and numbers of each product.

1. Product Data For LEED Items: Submit a complete list of paint materials proposed for use, together with manufacturer's technical information, including paint label analysis, VOC content, and Material Safety Data Sheets (MSDS). (**LEED**).

B. A minimum of 30 days prior to initiating this work, submit to Architect for color selection and review, manufacturer's full range of standard color chips including deep tone color chips for each type of paint specified. Colors selected by Architect may not necessarily be manufacturer's standard colors.

C. After color selection and review, submit samples of each type and color of paint selected, applied to specified wood, metal, plaster, gypsum board, concrete and unit masonry.

D. Accepted color and sheen samples shall serve as minimum standard for painting work throughout building.

E. Submit test results certifying that recycled paint does not contain lead. (**LEED**).

F. Submit invoices and documentation from manufacturer of the amounts of post-consumer and post-industrial recycled content by weight for products with specified recycled content. (**LEED**).

1.04 MAINTENANCE PAINT

A. Provide two one gallon containers of each type and color of paint clearly identified as to type, color and location, for the nucleus of the Owner's maintenance use.

1.05 PRE-PAINTING INSPECTION (**LEED**)

A. Provide the services of an independent consultant to perform a pre-painting inspection of all surfaces to receive paint, including LEED requirements.

B. Correct all defects to the satisfaction of the pre-painting consultant.

C. Pre-painting consultant shall have a minimum five years experience inspecting projects of this magnitude.

PART 2 PRODUCTS

2.01 PAINT PRODUCTS, GENERAL

A. Use only products manufactured by the same manufacturer for primer or first coat and finish coats.

B. Manufacturers and Paint Schedule: Provide products by The Sherwin Williams Company, (800) 321-8194. Approved equal products following the established LEED requirements by the following listed manufactures may be submitted to the Architect for review: PPG Industries, Inc., (888) 774-7732.

PART 3 EXECUTION

3.01 PREPARATION OF SURFACES

A. Clean surface of all dirt, dust, or other contaminants which adversely affects adhesion of paint or appearance of finish. Moisture content of masonry, concrete and plaster surfaces shall not exceed 15 percent measured using a moisture meter. Thoroughly wash surfaces containing excess alkalinity as recommended by paint manufacturer.

B. Stucco, Plaster, Concrete and Masonry:
   1. Remove fins, projections, protruding nails or other metal fastenings and loose or foreign materials. Remove mortar splatters from exposed block.
   2. Patch large openings and holes with Portland cement mortar and after priming, fill remaining small depressions with a vinyl emulsion compound to match texture of surface. Vinyl emulsion compound shall be approved by the paint manufacturer.
   3. Remove form oil from concrete by washing with Xylol.
   4. Provide a Zinc-Chloride-Phosphoric Acid Pretreatment for cement plaster and concrete surfaces receiving alkyd oil paint or alkyd enamel.
      a. To each gallon of clean water add, by volume, 2% of zinc chloride and 3% concentrated phosphoric acid. Add a water soluble coloring to pretreatment solution in sufficient quantity to clearly show that area has been treated.
      b. Do not apply to plaster or concrete which is in place less than 48 hours. Flood surfaces to excess with solution and allow to dry. When dry, remove loose salts by light dusting, avoid removing adhering crystals. Allow pretreatment to dry sufficiently before application of paint materials.
      c. Should an undesirable reaction occur which is detrimental to paint materials applied, prepare and repaint such areas at no additional cost to Owner. Not only shall area affected be repainted, but also areas encompassing same extending vertically and horizontally to a cut-off or definite break in building.

D. Gypsum Board: Fill minor irregularities with spackling compound and sand to a smooth level surface exercising care to avoid raising nap of paper. Do not paint until compound has fully cured.

E. Woodwork: Sand surfaces to achieve smooth finish. Prime wood to be painted and after drying, patch surface imperfections, cracks, holes, nail holes, and joints with putty, tinted to match transparent finish. Touch up knots and areas of high pitch content with shellac. Prepare surfaces to receive transparent finishes prior to applying first coat.

F. Metal: Wash metal surfaces with mineral spirits to remove grease, oil and dirt. Wire brush or sand surfaces to remove rust and scale. Touch-up factory-primed surfaces with compatible primer.

3.02 APPLICATION AND WORKMANSHIP

A. Perform work using experienced, skilled painters in accordance with manufacturer's published directions. Mix and thin paint only as prescribed by the paint manufacturer.

B. Apply paint using brush, rollers or airless spray equipment. Application methods used shall provide complete coverage, uniform colors, specified thicknesses, desired sheen and accepted texture. Cut in edges by brush next to trim, abutting items and internal corners. Repaint any surfaces where differences occur in coverage, or where surfaces contain runs, sags, holidays, brush marks, air bubbles or stipple.

C. For each coat of paint use slightly different shade than preceding coat to distinguish various coats.

D. Sand wood surfaces between each coat, dust and apply succeeding coats.

E. Apply succeeding coats only after paint is thoroughly dry in accord with manufacturer's published directions.

F. Seal tops and bottoms of wood doors and door penetrations. Finish side edges of wood doors and door penetrations same as faces of doors.

G. Finish paint tops, bottoms and side edges of exterior wood and hollow metal doors same as faces of doors.

H. Backprime all interior woodwork prior to installation with material specified for prime coat.

I. Do not paint bright-plated metal, non-ferrous metal or glass.

J. Before painting, remove or provide ample protection of hardware, accessories, plates, lighting fixtures and similar items. Replace items when painting is completed.

K. At completion of work, touch up and restore field painted finish where damaged prior to occupancy.

L. Do not paint valve stems of rising stem valves attached to exposed piping.

3.03 PAINTING SCHEDULE

A. Provide paint finishes, locations and type of coatings in accord with the Finish Schedule and the following schedule. Carefully examine the requirements of all sections of the specifications for this project as to the location, extent and nature of painting work required, and include such items to be painted which are not specifically included in the schedules.

B. Exterior Surfaces:
1. Ferrous Metal:
Touch-Up Shop Primed Surface 1 Coat - Oil Alkyd Primer
2 Coats - Gloss Alkyd Enamel

2. Galvanized Metal:
   1 Coat - Oil Alkyd for Galvanized Metal
   2 Coats - Gloss Alkyd Enamel
3. Wood Surfaces:
   1 Coat Oil Primer
   2 Coats - Gloss Alkyd Enamel
4. PVC Pipe:
   2 Coats - Flat Latex; U.V. protective, dry film thickness 2.5 mils per coat.

C. Interior Surfaces:
1. Gypsum Board:
   1 Coat - Latex Primer Sealer
   2 Coats - Flat Latex
2. Gypsum Board (Wet Areas or Areas Indicated):
   1 Coat - Latex Primer
   2 Coats - Gloss Epoxy
3. Block/Concrete:
   1 Coat - Latex Block Filler (for concrete block areas only)
   2 Coats - Flat Latex
4. Ferrous Metal:
   Touch-Up Shop Primed Surface
   1 Coat - Oil Alkyd Primer
   2 Coats - Eggshell Alkyd Enamel
5. Galvanized Metal: Use same type primer as specified in attached chart for exterior metal areas.
   1 Coat - Oil Alkyd Primer for Galvanized Metal
   2 Coats - Eggshell Alkyd Enamel
6. Exposed Ferrous Piping, Valves And Hangers:
   1 Coat - Oil Alkyd Primer
   2 Coats - Eggshell Alkyd Enamel
7. Exposed Pipe Insulation:
   2 Coat - Glidden Insulcap Latex
   2 Coats - Eggshell Alkyd Enamel
8. Exposed Ductwork, Galvanized Piping And Conduits:
   1 Coat - Oil Alkyd for Galvanized Metal
   2 Coats - Eggshell Alkyd Enamel
9. Duck work visible through grilles or diffusers:
   1 Coat - Cement-in-Oil Primer
   1 Coat - Black Flat Alkyd Enamel
10. Exposed Copper Tubing, Valves and Fittings:
    1 Coat - Vinyl Wash Primer for Copper
    2 Coats - Eggshell Alkyd Enamel

D. Identification of Mechanical and Electrical Items:
1. Provide color code painting of piping and conduits of colors for various items as specified in Division 15 Mechanical and Division Electrical.
2. Pipe contents and piping contents flow direction arrow labels and valve tags; electrical equipment and conductor labels are specified in Division 15 Mechanical and Division 16 Electrical.

3.04 INDOOR AIR QUALITY (**LEED**)

A. Wear protective clothing and respirators when applying oil-based paints or using spray equipment with any paints.

B. Maximize ventilation during application and drying.

C. Isolate area of application from rest of building.

D. Vacate space for as long as possible after application. Wait a minimum of 48 hours before occupying freshly painted rooms.

3.05 WASTE MANAGEMENT (**LEED**)

A. Separate waste in accordance with the Waste Management Plan. Set aside extra paint for future color matches, or reuse by Owner, Habitat for Humanity, etc. Where local options exist for leftover paint recycling, collect all waste paint by type and provide for delivery to recycling or collection facility.

B. Close and tightly seal all partly used paint and finish containers and store protected in well-ventilated, fire-safe area at moderate temperature.

C. Place empty containers of solvent-based paints in areas designated for hazardous materials.

D. Do not dispose of paints or solvents by pouring on the ground. Place in designated containers for proper disposal.

END OF SECTION

SECTION 07121

BALCONY WATERPROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fluid applied waterproofing applied to exposed concrete balcony decks.

1.02 RELATED SECTIONS

A. Cast-In-Place Concrete - Section 03300.

B. Floor Drains - Division 15.

1.03 SUBMITTALS

A. Submit an affidavit from manufacturer approving applicator prior to installation. Applicator shall provide evidence of satisfactory application of the waterproofing specified.

B. Submit material product data and application manual from manufacturer which describes completely the preparation of surfaces and application of specified materials.

1.04 ENVIRONMENTAL REQUIREMENTS

A. Surface temperature not higher than 110 degrees F. and not lower than 40 degrees F. during the application.

B. Weather shall be clear with no rain during application or anticipated within 12 hours.

1.05 WARRANTY

A. Furnish Owner warranty covering watertight integrity of waterproofing for a period of five years from date of final
acceptance.

B. Warranty shall be signed by Contractor and Waterproofing Applicator.

PART 2 PRODUCTS

2.01 FLUID APPLIED WATERPROOFING

A. Provide "Vulkem 350 or 450" fluid applied waterproofing by Mameco International, Inc. Approved equal products by the following manufacturers may be submitted to the Architect for review:
1. "CCW" by Carlisle Coatings & Waterproofing, Inc., (800) 543-7763.
2. Neogard "Pedagard", Neogard Div. of Jones–Blair.
3. Sonneborn Building Products Division Contech Inc.

2.02 PRIMER

A. As recommended by waterproofing manufacturer for each type of surface encountered if and as needed.

2.03 JOINT FILLER

A. Round elastomeric foam cord of type recommended by waterproofing manufacturer.

2.04 SEALANT

A. As recommended by waterproofing manufacturer for compatibility with waterproofing system.

PART 3 EXECUTION

3.01 CONDITION OF SURFACES

A. Concrete horizontal surfaces shall be trowel finished without sharp ridges, projections, voids and concrete or mortar droppings.

B. Concrete vertical surfaces shall be smooth formed without sharp ridges, projections, voids and concrete or mortar droppings.

C. Concrete surfaces to receive waterproofing shall be water cured or cured with silicate type chemical curing compound compatible with waterproofing. Resin or wax type curing compound shall not be used.

D. Surfaces to receive waterproofing shall be dry and acceptable to waterproofing applicator. Application of waterproofing will be considered as acceptance of surfaces to receive waterproofing.

3.02 PREPARATION OF SURFACES

A. After concrete substrate has cured 14 days with a maximum of 8% moisture content, have projections, voids, concrete and mortar droppings corrected, then thoroughly clean surfaces immediately prior to installation of waterproofing using compressed air, vacuum or other methods.

B. Remove oil, grease, form oils and resin type curing compounds with a commercial grade alkaline cleaner or solvent; thoroughly rinse and dry.

C. Concrete surface shall be dry and pass a four-hour rubber mat test with no condensation prior to application of waterproofing system. Test will not be required on vertical walls open on both sides.

3.03 PREPARATION OF JOINTS, CRACKS AND DEPRESSIONS

A. Clean expansion, control and construction joints by cutting back a minimum of 1 inch. Install foam joint backing rod compressed 50 percent providing a channel below level of slab of depth equal to 1/2 width and with 1/2 inch depth maximum. Fill joint to surface level with

sealant, apply bond breaker, and cover with non-flowing type waterproofing or preformed neoprene or urethane sheet to a width of 3 inches on each side of joint as hereinafter specified.

B. Rout or sawcut cracks exceeding 1/16 inch in width and fill with sealant. Treat cracks by cleaning thoroughly and applying 60 mils of waterproofing extending 3 inches from each side of crack.

C. Prepare concrete substrates by filling voids, holes and depressions with epoxy grout or acrylic bonding agent and cement-sand grout as recommended by waterproofing manufacturer.

D. At horizontal, vertical and corner expansion joints, provide joint filler and sealant application compatible with waterproofing system. Bridge joints using preformed neoprene or urethane membrane or with 60 mil coating of fiberglass mesh reinforced waterproofing or strip of neoprene sheet as standard with manufacturer, applied over bond breaker on expansion joint. Extend waterproofing a minimum of 6 inches from each side of joint, adhered to deck and vertical surfaces.

3.04 PREPARATION OF VERTICAL PROTRUSIONS AND DRAINS

A. Clean exposed metal surfaces such as pipes, sleeves, drains, bases and ducts by removing paint, rust, scale or any foreign matter.

B. Metal preparation and priming shall be in accord with manufacturer's recommendations and, if required prime coat metal surfaces a maximum of 8 hours prior to membrane application with waterproofing manufacturer's metal primer.

C. Apply a 60 mil waterproofing coating to entire surface, extending waterproofing up to bottom of sealant in top surfaces of deck areas and extend membrane out on or up vertical surfaces 4 inches on projections.

D. Extend waterproofing over flanges of drains without sealing weep holes.

3.05 PATCHING

A. Repair leaks which develop and retest. Patch voids, bubbles, depressions, imperfections or tears in strict accord with manufacturers published recommendations.

END OF SECTION

SECTION 07120

FLUID APPLIED WATERPROOFING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fluid applied waterproofing applied to exterior sides of elevator pit walls.

B. Protection board.

1.02 RELATED SECTIONS

A. Cast-In-Place Concrete - Section 03300.

B. Reinforced Masonry - Section 04230.

C. Stucco - Section 09200.

D. Floor Drains - Division 15.

1.03 SUBMITTALS

A. Submit an affidavit from manufacturer approving applicator prior to installation. Applicator shall provide evidence of satisfactory application of the system specified.

B. Submit material product data and application manual from manufacturer which describes completely the preparation of surfaces and application of specified materials.

1.04 ENVIRONMENTAL REQUIREMENTS

A. Surface temperature not higher than 110 degrees F. and not lower than 40 degrees F. during the application.

B. Weather shall be clear with no rain during application or anticipated within 12 hours.

1.05 QUALITY ASSURANCE

A. Manufacturer for waterproofing shall show evidence of having been in business for a period of five years manufacturing waterproofing products similar to those specified.

B. Prior to starting work, submit a list of a minimum of three satisfactory waterproofing installations performed by the applicator using materials and methods similar to those specified herein.

1.06 WARRANTY

A. Furnish Owner warranty covering watertight integrity of waterproofing for a period of five years from date of final acceptance. Warranty shall provide for prompt repair of leaks and ruptures, blisters and other imperfections at no additional cost to Owner.

B. Warranty shall be signed by Contractor and Waterproofing Applicator.

PART 2 PRODUCTS

2.01 FLUID APPLIED WATERPROOFING

A. Acceptable Manufacturers and Brands:
1. Carlisle Coatings & Waterproofing, Inc., "CCW 525", (800) 543-7763.
2. Mameco International, Inc., "Vulkem 201", (800) 321-7901.
3. Sonneborn Building Products Division Contech Inc., "Hydrocide Liquid Membrane 5000", (800) 433-9517.
4. 3M Company, "Scotch-Clad Deck Coating System M", (888) 364-3572.
5. W. R. Grace & Co., "Procor", (800) 444-6459.

2.02 PRIMER

A. As recommended by waterproofing manufacturer for each type of surface encountered if and as needed.

2.03 PROTECTION BOARD

A. 1/8 inch thick asphalt composition board "Sealtight Protection Course" by W. R. Meadows or "Tex-Mastic Backerboard" by J. & P. Petroleum Products, Inc., or approved equal.

2.04 JOINT FILLER

A. Round elastomeric foam cord of type recommended by waterproofing manufacturer.

2.05 SEALANT

A. As recommended by waterproofing manufacturer for compatibility with waterproofing system.

2.06 ACCESSORY MATERIALS

A. Provide 1/16 inch thick elastomeric sheet material, adhesives, or trowel grade waterproofing, woven uncoated fiberglass mesh flashing reinforcement, thinners and application equipment necessary to complete work of this section as recommended by the membrane manufacturer.

PART 3 EXECUTION

3.01 CONDITION OF SURFACES

A. Concrete horizontal surfaces shall be trowel finished without sharp ridges, projections, voids and concrete or mortar droppings.

B. Concrete vertical surfaces shall be smooth formed without sharp ridges, projections, voids and concrete or mortar droppings.

C. Concrete surfaces to receive waterproofing shall be water cured or cured with silicate type chemical curing compound compatible with waterproofing. Resin or wax type curing compound shall not be used.

D. Surfaces to receive waterproofing shall be dry and acceptable to waterproofing applicator. Application of waterproofing will be considered as acceptance of surfaces to receive waterproofing.

3.02 PREPARATION OF SURFACES

A. After concrete substrate has cured 14 days with a maximum of 8% moisture content, have projections, voids, concrete and mortar droppings corrected, then thoroughly clean surfaces immediately prior to installation of waterproofing using compressed air, vacuum or other methods.

B. Remove oil, grease, form oils and resin type curing compounds with a commercial grade alkaline cleaner or solvent; thoroughly rinse and dry.

C. Concrete surface shall be dry and pass a four-hour rubber mat test with no condensation prior to application of waterproofing system. Test will not be required on vertical walls open on both sides.

3.03 PREPARATION OF JOINTS, CRACKS AND DEPRESSIONS

A. Clean control and construction joints by cutting back a minimum of 1 inch. Install foam joint backing rod compressed 50 percent providing a channel below level of slab of depth equal to 1/2 width and with 1/2 inch depth maximum. Fill joint to surface level with sealant, apply bond breaker, and cover with non-flowing type waterproofing or preformed neoprene or urethane sheet to a width of 3 inches on each side of joint as hereinafter specified.

B. Rout or sawcut cracks exceeding 1/16 inch in width and fill with sealant. Treat cracks by cleaning thoroughly and applying 60 mils of waterproofing extending 3 inches from each side of crack.

C. Prepare concrete substrates by filling voids, holes and depressions with epoxy grout or acrylic bonding agent and cement-sand grout as recommended by waterproofing manufacturer.

D. At horizontal, vertical and corner expansion joints, provide joint filler and sealant application compatible with waterproofing system. Bridge joints using preformed neoprene or urethane membrane or with 60 mil coating of fiberglass mesh reinforced waterproofing or strip of neoprene sheet as standard with manufacturer, applied over bond breaker on expansion joint. Extend waterproofing a minimum of 6 inches from each side of joint, adhered to deck and vertical surfaces.

3.04 PREPARATION OF VERTICAL PROTRUSIONS AND DRAINS

A. Clean exposed metal surfaces such as pipes, sleeves, drains, bases and ducts by removing paint, rust, scale or any foreign matter.

B. Metal preparation and priming shall be in accord with manufacturer's recommendations and, if required prime coat metal surfaces a maximum of 8 hours prior to membrane application with waterproofing manufacturer's metal primer.

C. Apply a 60 mil waterproofing coating to entire surface, extending waterproofing up to bottom of sealant in top surfaces of deck areas and extend membrane out on or up vertical surfaces 4 inches on projections.

D. Extend waterproofing over flanges of drains without sealing weep holes.

3.05 WATERPROOFING APPLICATION

A. For two component type waterproofing, mix materials in strict accord with manufacturer's published instructions without incorporating air bubbles; do not thin or dilute mixture. Conform to recommended "Pot-Life" requirements.

B. For single component type waterproofing, use as furnished without dilution.

C. Apply waterproofing uniformly on surfaces to produce 60 mils (Dry Film) thickness using a trowel, calibrated notched squeegee or airless spray equipment approved by manufacturer. 60 mil thickness is exclusive of previously applied waterproofing materials at cracks and joints.

D. Apply non-flowing type waterproofing material forming a continuous flashing and a 1/2 inch x 1/2 inch triangular cant, or other size recommended by waterproofing manufacturer. Extend waterproofing 4 inches up vertically unless otherwise indicated.

E. Apply waterproofing on exterior of elevator pit walls.

3.06 TESTING

A. Do not flood test waterproofing sooner than 36-hours following completion of application. Plug drains and place barriers to contain water. Flood test each deck and shower stall for a period of 48 hours minimum using a minimum of 2 inches of standing water.

3.07 PATCHING

A. Repair leaks which develop and retest. Patch voids, bubbles, depressions, imperfections or tears in strict accord with manufacturers published recommendations.

3.08 APPLICATION OF PROTECTION BOARD

A. Apply no protection board to waterproofing until successful testing has been completed.

B. Apply protection board to horizontal surfaces and vertical surfaces of waterproofing. Adhere with spots of waterproofing.

END OF SECTION

SECTION 07142

WATERPROOFING BELOW FLOOR TILE AT LAUNDRY ROOM

PART 1 GENERAL

1.01 SUMMARY

A. Section includes: Provide a complete polyurethane waterproofing membrane system including all applicable sealants and elastomeric flashings needed to prevent water penetration at locations shown on drawings.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.

1.02 SUBMITTALS

A. Comply with pertinent provisions of Section 01340.

B. Product data:
   1. Materials list of items proposed to be provided under this Section;
   2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements;
   3. Shop Drawings or catalog illustrations in sufficient detail to show installation and interface of the work of this Section with the work of adjacent trades;
   4. Manufacturer's current recommended installation procedures which, when reviewed by Architect, will become the basis for accepting or rejecting actual installation procedures used on the Work;
   5. Written documentation of applicator's qualifications, including reference projects of similar scope and complexity, with current phone contacts of architects and owners for verification.

C. Mock-up: Prior to installation, prepare a sample panel of the work of this Section at a location on the job site where approved by the Architect.
   1. Make the sample panel in dimensions approved by the Architect and with one panel for each of the various types of installation.
   2. Show all aspects of the work of this Section to the quality specified.
   3. Make necessary adjustments in the sample panel(s) and secure the Architect's approval.
   4. The sample panel(s), when approved by the Architect, will be used as a datum point for comparison with the remainder of the work of this Section for the purpose of acceptance or rejection.
   5. Upon approval of the Architect, the sample panel(s) may become actual part of the installation required for this Work.

1.03 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen thoroughly trained and experienced in the necessary crafts and completely familiar with the specified requirements and methods needed for proper performance of the work of this Section.

B. Applicator qualifications:
   1. Applicator shall have at least five (5) years experience in installing materials of types specified and shall have successfully completed at least three projects of similar scope and complexity.
   2. Applicator shall designate a single individual as project foreman who shall be on site at all times during installation.

C. Convene a pre-installation job-site conference four weeks prior to commencing work of this Section:
   1. Secure attendance by Architect, Contractor, applicator, and authorized representatives of the membrane system manufacturer and interfacing trades.
   2. Examine Drawings and Specifications affecting work of this Section, verify all conditions, review installation procedures, and coordinate scheduling with interfacing portions of the Work.

1.04 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to job site in manufacturer's unopened containers with all labels intact and legible at time of use.

B. Maintain the products in accord with manufacturer's recommendations with proper precautions to ensure fitness of material when installed.

C. Comply with pertinent provisions of Section 01600.

1.05 SUBSTRATE CONDITIONS

A. General:
   1. Provide applicator with surfaces that are broom clean, dry, sound and free of voids, bugholes, rockpockets, honeycombs, protrusions, excessive roughness, foreign matter, frost, ice and other contaminants which may inhibit application or performance of the waterproofing membrane system.
   2. Using suitable abrasive methods, remove residue of form release, curing compound, chemical retarders and other surface treatments, laitance, mortar smear, sawcutting residue, mill scale, rust, loose material and other contaminants from concrete, masonry and ferrous metal surfaces to receive the work of this Section.

B. Concrete: Where work of this Section will be applied to concrete, provide surfaces that are smooth with finish equal to one that is light steel troweled followed by a fine hair broom.

C. Plywood: Where work of this Section will be applied to plywood, provide exterior grade plywood, 5/8" thick minimum, with A-side up, fastened with ring-shank nails.

D. Decks:
   1. Slope deck surfaces to drains that have flanges at membrane level which are flush with deck surfaces.
   2. Rigidly install pipe, vents and other surface protrusions, properly flash them, and cover to prevent entry of membrane materials.

E. Metal flashings: Where metal flashings are substrate to waterproofing membrane, set the flashings in continuous bedding bead of urethane sealant; install sealant S-bead between metal laps and mechanically fasten to substrate along leading edges at every 4" on center, staggered linearly, to lay flat without fishmouths.

F. Joints: Configuration shall be consistent with this Section and with all other requirements of the Contract Documents.

1.06 WARRANTY

A. Deliver to the Architect signed copies of the following written warranties against defective materials and workmanship for a period of fifteen (15) years following date of completion. Warrant that installed waterproofing membrane system shall be free of defects including adhesive failure, cohesive failure, and waterproofing failure.
   1. Manufacturer's standard warranty covering materials;
   2. Applicator's standard warranty covering workmanship.

PART 2 PRODUCTS

2.01 GENERAL

A. Provide a complete fluid applied elastomeric waterproofing membrane system having the following minimum attributes:
   1. 79-100 percent solids pure polyurethane designed for waterproofing concealed building components subject to hydrostatic head;
   2. Designed for use under ceramic tile on mortar bed;
   3. Complying with ASTM C836-89a.
   4. Acceptable products:
      a. Vulkem 350-SL or 350-R
      b. Vulkem 360 NF
      c. Vulkem 351

B. Provide Ultra Tex as the approved Thin Set Material and apply as per Euclid's application instructions (800-321-7628) www.euclidchemical.com. This thin-set material has been tested to the standards and requirements of the TCA.

2.02 ACCESSORIES

A. Primer: As recommended by waterproofing membrane system manufacturer;
   1. Provide Vulkem

B. Joint backing: Closed-cell, polyethylene rod as recommended by membrane manufacturer;

C. Elastomeric sheet flashing: 1/16 inch thick by 12 inch wide uncured neoprene sheeting;
D. Sealant:
   1. Dymeric 240/240 FC - two-part
   2. Vulkem 227 – two-part

2.03 OTHER MATERIALS

A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor and approved by the membrane system manufacturer as compatible, subject to review of the Architect.

PART 3 EXECUTION

3.01 SURFACE CONDITIONS

A. Coordinate as required with other trades to assure proper and adequate provision in the work of those trades for interface with the work of this Section.
B. Applicator shall examine the areas and conditions under which work of this Section will be performed.
   1. Verify conformance with manufacturer's requirements;
   2. Report unsatisfactory conditions in writing to the Architect;
   3. Do not proceed until unsatisfactory conditions are corrected.

3.02 PREPARATION

A. Surface preparation and detailing procedures to be in accord with waterproofing membrane system manufacturer's instructions and recommendations except where more stringent requirements are indicated.
B. Clean all surfaces to receive membrane system in accord with manufacturer's instructions; vacuum clean or blow clean with oil-free compressed air all surfaces to receive sealants, detailing materials or membrane immediately prior to installation.
C. Rout, clean, prepare and detail surface cracks in accord with manufacturer's instructions; install backer rod where required.
D. Clean metal surfaces to bright metal by wire brushing or mechanical etching; scuff-sand lead flashing and plastic surfaces.
E. Prime surfaces in accord with manufacturer's instructions.
F. Install 1/4" diameter backer rod into corner of all horizontal-to-vertical junctures subject to movement and cover with 1" detail cant of approved sealant; install 1" detail cants at projections, curbs and other horizontal-to-vertical junctures.
G. Install detail coats, joint and crack treatments, and liquid flashings in accord with manufacturer's instructions.
H. Allow detail applications to cure in accord with manufacturer's instructions prior to general application of membrane.

I. Slope flat decks to prevent ponding water with Vulkem 360NFmixed with 20-30 grit sand as per recommended by Tremco. Decks shall maintain a minimum 1/8 inch slope. After deck(s) have been sloped apply a thin coat of Vulkem 360 and seed to rejection with 30-60 grit aggregate if no Vulkem 351 top coat is to be applied.

3.03 APPLICATION

A. General: Install waterproofing system in accord with manufacturer's recommendations and instructions as applies to the Work except where more stringent requirements are indicated.
   1. Waterproofing membrane have a minimum 60 mil dry-film thickness on concrete and block masonry substrates,
   2. Waterproofing membrane shall have a minumum 60 mil dry-film thickness on plywood substrates.
   3. Grid deck surfaces to assure proper coverage rates and verify membrane wet-film mil thickness with gauges as work progresses.
   4. Retain empty product containers during course of work to aid in determining whether completed membrane complies with required average dry-film thickness.

B. Verify proper dry condition of substrate using method recommended by membrane system manufacturer; perform adhesion checks prior to general application of membrane system using field adhesion test method recommended by manufacturer.

C. Mask off adjoining surfaces not to receive membrane system.

D. Wipe clean all detail coats with white rags wetted with Xylene solvent; do not saturate detail coat.

E. Apply membrane uniformly and allow to cure in accord with manufacturer's instructions.

F. Feather edge when entire area cannot be completed in one day; clean area 6" wide along edge of membrane with Xylene solvent on clean white rags prior to startup on next working day; use interlaminary primer per manufacturer's instructions as needed; overlap existing work by 6" with new work.

G. Flood test: Plug drains on deck surfaces and use sand bags or other means to restrict runoff. Flood deck with water to depth of 2" (50 mm) and allow to stand at least 48 hours; repair leaks if occurs and retest.

H. 24 Hours after application of base coat membrane, apply a second coat of membrane at 10 mils wet, approximately 160 s.f. per gallon coverage, and broadcast silica sand to rejection.

I. 72 Hours following second coat of membrane with sand, blow off extra sand, and apply approved thin-set material as per manufacturers instructions and set approved ceramic tile into thin-set.

J. Any distance greater than 10' in either direction shall receive an approved urethane sealant joint, instead of a hard grout joint, to allow movement of ceramic tile floor.

K. If decks are not tiled within 60 days after base coat application install Vulkem 351 topcoat immediately after the Vulkem 450/360 has cured.

3.04 FIELD QUALITY CONTROL

A. Applicator shall inspect completed work one day prior to final covering and effect repairs.

3.05 PROTECTION AND CLEAN-UP

A. Promptly remove primer or membrane system material from adjacent surfaces with MEK, Toluene or Xylene; leave work area in broom clean condition.
B. Prohibit traffic over completed work and protect membrane from damage until protected beneath overlaying work.

END OF SECTION

SECTION 01352 - LEED REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes general requirements and procedures for compliance with certain USGBC LEED prerequisites and credits needed for Project to obtain LEED Silver certification based on LEED-NC, Version 2.2.

1. Other LEED prerequisites and credits needed to obtain LEED certification depend on material selections and may not be specifically identified as LEED requirements. Compliance with requirements needed to obtain LEED prerequisites and credits may be used as one criterion to evaluate substitution requests and comparable product requests.
2. Additional LEED prerequisites and credits needed to obtain the indicated LEED certification depend on Architect's design and other aspects of Project that are not part of the Work of the Contract.
3. A copy of the LEED Project checklist is attached at the end of this Section for information only.

B. Related Sections:

1. Divisions 1 through 16 Sections for LEED requirements specific to the work of each of these Sections. Requirements may or may not include reference to LEED.

1.3 DEFINITIONS

A. Chain-of-Custody Certificates: Certificates signed by manufacturers certifying that wood used to make products was obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship." Certificates shall include evidence that manufacturer is certified for chain of custody by an FSC-accredited certification body.

B. LEED: Leadership in Energy & Environmental Design.

C. Rapidly Renewable Materials: Materials made from plants that are typically harvested within a 10-year or shorter cycle. Rapidly renewable materials include products made from bamboo, cotton, flax, jute, straw, sunflower seed hulls, vegetable oils, or wool.

D. Regional Materials: Materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles (800 km) of Project site. If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally, then only that percentage (by weight) shall contribute to the regional value.

E. Recycled Content: The recycled content value of a material assembly shall be determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.

1. "Post-consumer" material is defined as waste material generated by households or by commercial, industrial, and institutional facilities in their role as end users of the product, which can no longer be used for its intended purpose.
2. "Pre-consumer" material is defined as material diverted from the waste stream during the manufacturing process. Excluded is reutilization of materials such as rework, regrind, or scrap generated in a process and capable of being reclaimed within the same process that generated it.

1.4 SUBMITTALS

A. General: Submit additional LEED submittals required by other Specification Sections.

B. LEED submittals are in addition to other submittals. If submitted item is identical to that submitted to comply with other requirements, submit duplicate copies as a separate submittal to verify compliance with indicated LEED requirements.

C. Project Materials Cost Data: Provide statement indicating total cost for building materials used for Project, excluding mechanical, electrical, and plumbing components, and specialty items such as elevators and equipment. Include statement indicating total cost for wood-based materials used for Project.

D. LEED Action Plans: Provide preliminary submittals within 60 days of date established for commencement of the Work indicating how the following requirements will be met:

1. Credit MR 2.1 and Credit MR 2.2: Waste management plan complying with Division 1 Section "Construction Waste Management."
2. Credit MR 4.1 and Credit MR 4.2: List of proposed materials with recycled content. Indicate cost, post-consumer recycled content, and pre-consumer recycled content for each product having recycled content.
3. Credit MR 5.1 and Credit MR 5.2: List of proposed regional materials. Identify each regional material, including its source, cost, and the fraction by weight that is considered regional.
4. Credit MR 7: List of proposed certified wood products. Indicate each product containing certified wood, including its source and cost of certified wood products.
5. Credit EQ 3.1: Construction indoor-air-quality management plan.

E. LEED Progress Reports: Concurrent with each Application for Payment, submit reports comparing actual construction and purchasing activities with LEED action plans for the following:

1. Credit MR 2.1 and Credit MR 2.2: Waste reduction progress reports complying with Division 1 Section "Construction Waste Management."
2. Credit MR 4.1 and Credit MR 4.2: Recycled content.
3. Credit MR 5.1 and Credit MR 5.2: Regional materials.
4. Credit MR 7: Certified wood products.

F. LEED Documentation Submittals:

1. Credit EA 5: Product data and wiring diagrams for sensors and data collection system used to provide continuous metering of building energy-consumption performance over a period of time of not less than one year of postconstruction occupancy.
2. Credit MR 2.1 and Credit MR 2.2: Comply with Division 1 Section "Construction Waste Management."
3. Credit MR 4.1 and Credit MR 4.2: Product data and certification letter indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content. Include statement indicating costs for each product having recycled content.

4. Credit MR 5.1 and Credit MR 5.2: Product data for regional materials indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.
5. Credit MR 7: Product data and chain-of-custody certificates for products containing certified wood. Include statement indicating cost for each certified wood product.
6. Credit EQ 3.1:

    a. Construction indoor-air-quality management plan.
    b. Product data for temporary filtration media.
    c. Product data for filtration media used during occupancy.
    d. Construction Documentation: Six photographs at three different times during the construction period, along with a brief description of the SMACNA approach employed, documenting implementation of the indoor-air-quality management measures, such as protection of ducts and on-site stored or installed absorptive materials.

7. Credit EQ 4.1: Product data for adhesives and sealants used inside the weatherproofing system indicating VOC content of each product used. Indicate VOC content in g/L calculated according to 40 CFR 59, Subpart D (EPA Method 24).
8. Credit EQ 4.2: Product data for paints and coatings used inside the weatherproofing system indicatingVOC content of each product used. Indicate VOC content in g/L calculated according to 40 CFR 59, Subpart D (EPA Method 24).
9. Credit EQ 4.4: Product data for products containing composite wood or agrifiber products or wood glues indicating that they do not contain urea-formaldehyde resin.

1.5 QUALITY ASSURANCE

A. LEED Coordinator: Engage an experienced LEED-Accredited Professional to coordinate LEED requirements. LEED coordinator may also serve as waste management coordinator.

PART 2 - PRODUCTS

2.1 RECYCLED CONTENT OF MATERIALS

A. Credit MR 4.1 and Credit MR 4.2: Provide building materials with recycled content such that post-consumer recycled content plus one-half of pre-consumer recycled content constitutes a minimum of 20 percent of cost of materials used for Project.

1. Cost of post-consumer recycled content of an item shall be determined by dividing weight of post-consumer recycled content in the item by total weight of the item and multiplying by cost of the item.
2. Cost of post-consumer recycled content plus one-half of pre-consumer recycled content of an item shall be determined by dividing weight of post-consumer recycled content plus one-half of pre-consumer recycled content in the item by total weight of the item and multiplying by cost of the item.
3. Do not include mechanical and electrical components in the calculation.

2.2 REGIONAL MATERIALS

A. Credit MR 5.1 and Credit MR 5.2: Provide 20 percent of building materials (by cost) that are regional materials.

2.3 CERTIFIED WOOD

A. Credit MR 7: Provide a minimum of 50 percent (by cost) of wood-based materials that are produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."

1. Wood-based materials include, but are not limited to, the following materials when made from wood, engineered wood products, or wood-based panel products:

a. Rough carpentry.
b. Miscellaneous carpentry.
c. Heavy timber construction.
d. Wood decking.
e. Metal-plate-connected wood trusses.
f. Structural glued-laminated timber.
g. Finish carpentry.
h. Architectural woodwork.
i. Wood paneling.
j. Wood veneer wall covering.
k. Wood flooring.
l. Wood lockers.
m. Wood cabinets.
n. Furniture.

2.4 LOW-EMITTING MATERIALS

A. Credit EQ 4.1: For field applications that are inside the weatherproofing system, use adhesives and sealants that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

1. Wood Glues: 30 g/L.
2. Metal to Metal Adhesives: 30 g/L.
3. Adhesives for Porous Materials (Except Wood): 50 g/L.
4. Subfloor Adhesives: 50 g/L.
5. Plastic Foam Adhesives: 50 g/L.
6. Carpet Adhesives: 50 g/L.
7. Carpet Pad Adhesives: 50 g/L.
8. VCT and Asphalt Tile Adhesives: 50 g/L.
9. Cove Base Adhesives: 50 g/L.
10. Gypsum Board and Panel Adhesives: 50 g/L.
11. Rubber Floor Adhesives: 60 g/L.
12. Ceramic Tile Adhesives: 65 g/L.
13. Multipurpose Construction Adhesives: 70 g/L.
14. Fiberglass Adhesives: 80 g/L.
15. Contact Adhesive: 80 g/L.
16. Structural Glazing Adhesives: 100 g/L.
17. Wood Flooring Adhesive: 100 g/L.
18. Structural Wood Member Adhesive: 140 g/L.
19. Special Purpose Contact Adhesive (contact adhesive that is used to bond melamine covered board, metal, unsupported vinyl, Teflon, ultra-high molecular weight polyethylene, rubber or wood veneer 1/16 inch or less in thickness to any surface): 250 g/L.
20. Top and Trim Adhesive: 250 g/L.
21. Plastic Cement Welding Compounds: 350 g/L.
22. ABS Welding Compounds: 400 g/L.
23. CPVC Welding Compounds: 490 g/L.

24. PVC Welding Compounds: 510 g/L.
25. Adhesive Primer for Plastic: 650 g/L.
26. Sheet Applied Rubber Lining Adhesive: 850 g/L.
27. Aerosol Adhesive, General Purpose Mist Spray: 65 percent by weight.
28. Aerosol Adhesive, General Purpose Web Spray: 55 percent by weight.
29. Special Purpose Aerosol Adhesive (All Types): 70 percent by weight.
30. Other Adhesives: 250 g/L.
31. Architectural Sealants: 250 g/L.
32. Nonmembrane Roof Sealants: 300 g/L.
33. Single-Ply Roof Membrane Sealants: 450 g/L.
34. Other Sealants: 420 g/L.
35. Sealant Primers for Nonporous Substrates: 250 g/L.
36. Sealant Primers for Porous Substrates: 775 g/L.
37. Modified Bituminous Sealant Primers: 500 g/L.
38. Other Sealant Primers: 750 g/L.

B. Credit EQ 4.2: For field applications that are inside the weatherproofing system, use paints and coatings that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

1. Flat Paints, Coatings, and Primers: VOC not more than 50 g/L.
2. Nonflat Paints, Coatings, and Primers: VOC not more than 150 g/L.
3. Anticorrosive and Antirust Paints Applied to Ferrous Metals: VOC not more than 250 g/L.
4. Clear Wood Finishes, Varnishes: VOC not more than 350 g/L.
5. Clear Wood Finishes, Lacquers: VOC not more than 550 g/L.
6. Floor Coatings: VOC not more than 100 g/L.
7. Shellacs, Clear: VOC not more than 730 g/L.
8. Shellacs, Pigmented: VOC not more than 550 g/L.
9. Stains: VOC not more than 250 g/L.

C. Credit EQ 4.4: Do not use composite wood or agrifiber products or adhesives that contain urea-formaldehyde resin.

PART 3 - EXECUTION

3.1 MEASUREMENT AND VERIFICATION

A. Credit EA 5: Implement measurement and verification plan consistent with Option B: Energy Conservation Measure Isolation or Option D: Calibrated Simulation, Savings Estimation Method 2 in the EVO's "International Performance Measurement and Verification Protocol (IPMVP) Volume III: Concepts and Options for Determining Energy Savings in New Construction," and as further defined by the following:

1. **<Insert measurement and verification plan design team submitted for credit>.**

B. If not already in place, install metering equipment to measure energy usage. Monitor, record, and trend log measurements.

C. Evaluate energy performance and efficiency by comparing actual to predicted performance.

D. Measurement and verification period shall cover at least one year of postconstruction occupancy.

3.2 CONSTRUCTION WASTE MANAGEMENT

A. Credit MR 2.1 and Credit MR 2.2: Comply with Division 1 Section "Construction Waste Management."

3.3 CONSTRUCTION INDOOR-AIR-QUALITY MANAGEMENT

A. Credit EQ 3.1: Comply with SMACNA's "SMACNA IAQ Guideline for Occupied Buildings under Construction."

1. If Owner authorizes use of permanent heating, cooling, and ventilating systems during construction period as specified in Division 1 Section "Temporary Facilities and Controls," install filter media having a MERV 8 according to ASHRAE 52.2 at each return-air inlet for the air-handling system used during construction.
2. Replace all air filters immediately prior to occupancy.

END OF SECTION 01352